

## **Birch Bay State Park Shoreline Stabilization Project**

This project was first proposed to save a Douglas Fir tree that possibly was here when Captain Vancouver landed in 1792 to calibrate chronometers and brew spruce beer. The tree is currently used as a perch by bald eagles.

The project scope was to bury ecology blocks in front of the tree and attach large root wads to them with cables. We then laid a geo-textile cloth against the bank and backfilled with 3 to 6 inch cobble rock to about 2 feet from the top. We then put in a layer of 2 inch drain rock with a dirt and sand mixture on top. Dune grass was planted to help control topsoil erosion.

Everything was going on schedule until a storm on December 13, 2001 increased the urgency for the project. A Nor'wester blew in with gusts up to 70 mph, moving most large, woody debris and eroding the last six to eight feet of bank between the tree and Puget Sound. This previously un-eroded area exposed a seventy foot section of bank that was rich in the pre-history of Birch Bay. The open archaeological site was a great concern to Washington State Parks and the Lummi Nation. We worked quickly to get an emergency exemption to the shorelines permit and proceeded with this soft-shore protection project. It became clear we were not only protecting a grand old fir, but also the heritage of the first people in the bay.

I was able to make the money go farther by donations. The Trillium Corporation donated the trees from a project within a few miles of the Park. The \$1,000 cost of the lift truck used to move the trees into place was donated by the BP Refinery. Some dune grass and volunteer time to plant it was also donated.

It has been almost one year since the project was done and it seems to have withstood the winter storms well. A few small areas eroded and will be repaired with routine maintenance. Washington State Parks is looking at this design as a model for other erosion control projects at their saltwater parks. I have attached some photos of the project. Thanks again for the partnership to preserve Washington's Parks.

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Erosion before the project started.



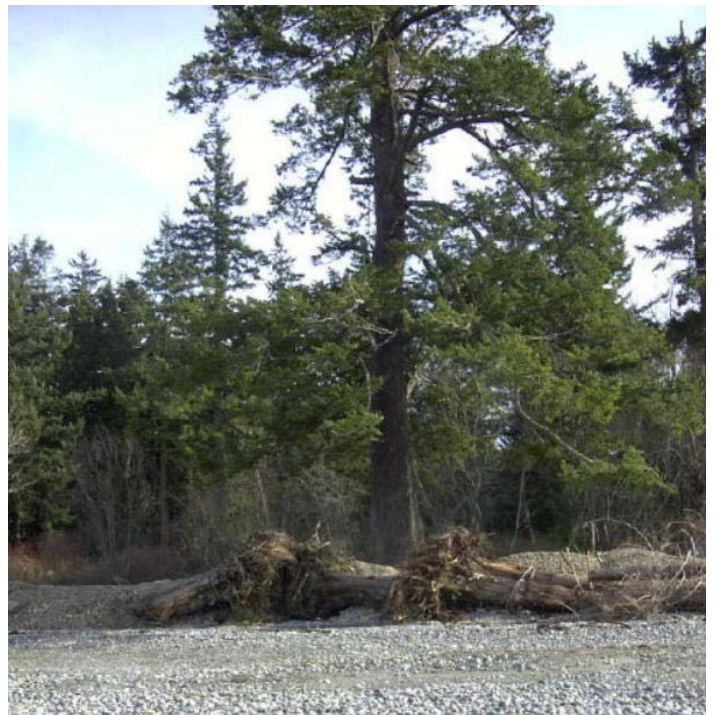
Project in progress.



Planting dune grass.



Completed project.



Protected Tree.